

# (19) United States

## (12) Patent Application Publication (10) Pub. No.: US 2017/0032561 A1 CHOI et al.

### Feb. 2, 2017 (43) Pub. Date:

### (54) METHOD OF GENERATING BITMAP OF THREE-DIMENSIONAL MODEL, DEVICE AND SYSTEM FOR PERFORMING THE **SAME**

- (71) Applicant: SAMSUNG SDS CO., LTD., Seoul (KR)
- (72) Inventors: Kwang-Min CHOI, Seoul (KR); Sung-Ho JANG, Seoul (KR); Sang-Hoon HAN, Seoul (KR); Jae-Young PARK, Seoul (KR)
- (73) Assignee: SAMSUNG SDS CO., LTD., Seoul (KR)
- (21) Appl. No.: 15/009,393

(30)

- (22)Filed: Jan. 28, 2016

Jul. 30, 2015 (KR) ...... 10-2015-0108282

Foreign Application Priority Data

#### **Publication Classification**

(51)Int. Cl. G06T 15/00 (2006.01)G06K 15/02 (2006.01)G06T 17/10 (2006.01)

U.S. Cl. CPC ...... G06T 15/00 (2013.01); G06T 17/10 (2013.01); G06K 15/02 (2013.01); G06K *15/1836* (2013.01)

#### (57)ABSTRACT

A method of generating bitmaps of a three-dimensional model, and a device and a system for performing the method are disclosed. The bitmap generator includes a model divider configured to divide the three-dimensional model into a plurality of sub models, wherein the three-dimensional model is divided in a direction parallel with an output direction of a three-dimensional printer, a plurality of sub bitmap generators each configured to generate a sub bitmap for a plane perpendicular to the output direction for the plurality of sub models, an operation distributer configured to transfer and distribute the plurality of sub models to the plurality of sub bitmap generators so that an operation of generating the sub bitmaps are processed in parallel, and a bitmap adder configured to merge the sub bitmaps whose coordinates of the output direction are the same among the generated plurality of sub bitmaps.

